

Substitute Form PTO-1449  
(Modified)U.S. Department of Commerce  
Patent and Trademark OfficeAttorney's Docket No.  
10559-633001Application No.  
10/039,425Information Disclosure Statement  
by Applicant

(Use several sheets if necessary)

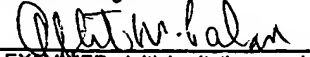
(37 CFR § 1.28(b))

Applicant  
Carl S. Marshall et al.Filing Date  
January 4, 2002Group Art Unit  
2672

## U.S. Patent Documents

Examiner Initial	Design ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
AWP	AA	4,600,919	07-1986	Stern	—	—	
AWP	AB	4,747,052	05-1988	Hishinuma et al.	—	—	
AWP	AC	4,835,712	05-1989	Drebin et al.	—	—	
AWP	AD	4,855,934	08-1989	Robinson	—	—	
AWP	AE	4,901,064	02-1990	Deering	—	—	
AWP	AF	5,124,914	06-1992	Grangeat	—	—	
AWP	AG	5,163,126	11-1992	Einkauf et al.	—	—	
AWP	AH	5,371,778	12-1994	Yanof et al.	—	—	
AWP	AI	5,611,030	03-1997	Stokes	—	—	
AWP	AJ	5,731,819	03-1998	Gagne et al.	—	—	
AWP	AK	5,757,321	05-1998	Billyard	—	—	
AWP	AL	5,786,822	07-1998	Sakaibara	—	—	
AWP	AM	5,805,782	09-1998	Foran	—	—	
AWP	AN	5,809,219	09-1998	Pearce et al.	—	—	
AWP	AO	5,812,141	09-1998	Kamen et al.	—	—	
AWP	AP	5,847,712	12-1998	Salesin et al.	—	—	
AWP	AQ	5,894,308	04-1999	Isaacs	—	—	
AWP	AR	5,929,860	07-1999	Hoppe	—	—	
AWP	AS	5,933,148	08-1999	Oka et al.	—	—	
AWP	AT	5,949,969	09-1999	Suzuoki et al.	—	—	
AWP	AU	5,966,133	10-1999	Hoppe	—	—	
AWP	AV	5,966,134	10-1999	Arias	—	—	
AWP	AW	5,974,423	10-1999	Margolin	—	—	
AWP	AX	6,054,999	04-2000	Strandberg	—	—	
AWP	AY	6,057,859	05-2000	Handelman et al.	—	—	
AWP	AZ	6,078,331	06-2000	Pulli et al.	—	—	
AWP	AAA	6,115,050	09-2000	Landau et al.	—	—	

Examiner Signature


**ALBERT W. PALADINO**  
 PATENT EXAMINER

Date Considered

7-7-05

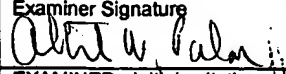
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form (PTO-1449)

Substitute Form PTO-1449 (Modified) JAN 07 2005 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 10559-633001	Application No. 10/039,425
	<b>Information Disclosure Statement          by Applicant</b> (Use several sheets if necessary)		
	Applicant Carl S. Marshall et al.	Filing Date January 4, 2002	Group Art Unit 2672

U.S. Patent Documents							
Examine r Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
Anf	ABB	6,175,655	01-2001	George et al.			
	ACC	6,191,787	02-2001	Lu et al.			
	ADD	6,191,796	02-2001	Tarr			
	AEE	6,198,486	03-2001	Junkins et al.			
	AFF	6,201,549	05-2001	Bronskill			
	AGG	6,208,347	03-2001	Migdal et al.			
	AHH	6,219,070	04-2001	Baker et al.			
	AII	6,239,808	05-2001	Kirk et al.			
	AJJ	6,252,608	06-2001	Snyder et al.			
	AKK	6,262,737	07-2001	Li et al.			
	ALL	6,262,739	07-2001	Migdal et al.			
	AMM	6,292,192	09-2001	Moreton			
	ANN	6,317,125	11-2001	Persson			
	AOO	6,337,880	01-2002	Cornog et al.			
	APP	6,388,670	05-2002	Naka et al.			
	AQQ	6,405,071	06-2002	Analoui			
	ARR	6,437,782	08-2002	Pieragostini et al.			
	ASS	6,478,680	11-2002	Yoshioka et al.			
	ATT	6,559,848	05-2003	O'Rourke			
	AUU	6,593,924	07-2003	Lake et al.			
	AVV	6,593,927	07-2003	Horowitz et al.			
	AWW	6,608,627	08-2003	Marshall et al.			
	AXX	6,608,628	08-2003	Ross et al.			
✓	AYY	2001/0026278	10-2001	Arai et al.			
Anr	AZZ	2002/0101421	08-2002	Pallister			

Foreign Patent Documents or Published Foreign Patent Applications							
Examiner	Desig.	Document	Publication	Country or	Class	Subclass	Translation

Examiner Signature  ALBERT W. PALADISI PATENT EXAMINER	Date Considered 7-7-05
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Substitute Form PTO-1449 (Modified)		U.S. Department of Commerce Patent and Trademark Office		Attorney's Docket No. 10559-633001		Application No. 10/039,425	
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR 51.52(b))				Applicant Carl S. Marshall et al.			
				Filing Date January 4, 2002		Group Art Unit 2672	
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AAAA							

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
<i>Ans</i>	ABBB	Appel, Arthur, "The Notion of Quantitative Invisiblity and the Machine Rendering of Solids." Proceedings of 22nd National Conference Association for Computing Machinery 1967.
<i>Ans</i>	ACCC	Buck et al., "Performance-Driven Hand Drawn Animation", ACM (NPAR2000), pgs. 101 - 108 (2000).
<i>Ans</i>	ADDD	Catmull et al., "Recursively Generated B-Spline Surfaces on Arbitrary Topological Meshes," Computer Aided Geometric Design, 10(6):350 - 355 (1978).
<i>Ans</i>	AEEE	Coelho et al., "An Algorithm for Intersecting and Trimming Parametric Meshes", ACM SIGGRAPH, pgs. 1 - 8 (1998).
<i>Ans</i>	AFFF	Deering, M., "Geometry Compression," Computer Graphics. SIGGRAPH '95, pages 13-20, 1995.
<i>Ans</i>	AGGG	DeRose et al., "Subdivisional Surfaces in Character Animation", ACM, SIGGRAPH'98, pgs. 85 - 94 (1998).
<i>Ans</i>	AHHH	Elber, Gershon, "Interactive Line Art Rendering of Freeform Surfaces", Eurographics'99, 18(3):C1 - C12 (1999).
<i>Ans</i>	AIHH	Gooch et al., "A Non-Photorealistic Lighting Model for Automatic Technical Illustration," Computer Graphics Proceedings, Annual Conference Series, SIGGRAPH'98, pgs. 447-452 (1998).
<i>Ans</i>	AJJJ	Gooch et al., "Interactive Technical Illustration," ACM Interactive 3D, pgs. 31 - 38 (1999).
<i>Ans</i>	AKKK	Heidrich et al., "Realistic, Hardware-Accelerated Shading and Lighting," ACM, (SIGGRAPH'99), pgs. 171 - 178 (1999).
<i>Ans</i>	ALLL	Kumar et al., "Interactive Display of Large Scale NURBS Models", ACM, Symp. On Interactive 3D Graphics, pgs. 51 - 58 (1995).
<i>Ans</i>	AMMM	Lake et al., "Stylized Rendering Techniques for Scalable Real-Time 3D Animation", NPAR, pgs. 101 - 108 (2000).
<i>Ans</i>	ANNN	Lander, Jeff, "Making Kine More Flexible," Game Developer Magazine, 5 pgs., November 1998.
<i>Ans</i>	AOOO	Lander, Jeff, "Skin Them Bones," Game Developer Magazine, 4 pgs., May 1998.
<i>Ans</i>	APPP	Pedersen, "A Framework for Interactive Texturing on Curved Surfaces", ACM, pgs. 295 - 301 (1996).
<i>Ans</i>	AQQQ	"pmG Introduces Messiah: Animate 3.0", URL: <a href="http://www.digitalproducer.com/aHTML/Articles/july_2000/july_17_00/pmg_intros_messiah_animate.htm">http://www.digitalproducer.com/aHTML/Articles/july_2000/july_17_00/pmg_intros_messiah_animate.htm</a> (Accessed 10/26/2004) 2 pgs.
<i>Ans</i>	ARRR	Pueyo, X. et al., "Rendering Techniques '96," Proc. of Eurographics Rendering Workshop 1996, EUROGRAPHICS, p[gs. 61 - 70 (1996).

Examiner Signature <i>Albert W. Paladino</i> <b>ALBERT W. PALADINO</b> <b>PATENT EXAMINER</b>	Date Considered 7-7-01
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<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR 1.98(b))		Applicant Carl S. Marshall et al.	
		Filing Date January 4, 2002	Group Art Unit 2672

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
AWP	ASSS	Rockwood, A. et al., "Real-time Rendering of Trimmed Surfaces," Computer Graphics (SIGGRAPH '89 Proceedings) 23:107 - 116 (1989).
AWP	ATTT	Sousa, M., et al., "Computer-Generated Graphite Pencil Rendering of 3-D Polygonal Models", Eurographics'99, 18(3):C195 - C207 (1999).
AWP	AUUU	Stam, J., "Exact Evaluation of Catmull-Clark Subdivision Surfaces at Arbitrary Parameter Values", SIGGRAPH 98 Conference Proceedings, Annual Conference Series, pgs. 395-404 (1998).
AWP	AVVV	Taubin et al., "3D Geometry Compression", SIGGRAPH'98 Course Notes (1998).
	<del>AWWW</del>	<del>Thomas (Contributor) et al., "The Illusion of Life: Disney Animation" 47-51</del>
AWM	AXXX	Wilhelms, J. & Van Gelder, A., "Anatomically Based Modeling," Univ. California Santa Cruz [online], 1997 [retrieved 12/22/2004], retrieved from the Internet: <URL: <a href="http://graphics.stanford.edu/courses/cs448-01-spring/papers/wilhelms.pdf">http://graphics.stanford.edu/courses/cs448-01-spring/papers/wilhelms.pdf</a> >.

Examiner Signature <i>Albert W. Paladini</i>	<b>ALBERT W. PALADINI</b> <b>PATENT EXAMINER</b>	Date Considered 7-7-05
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Carl S. Marshall et al.Filing Date  
January 4, 2002Group Art Unit  
2123 2125

(37 CFR § 1.98(b))

## U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
AW	AA	US 4,600,919	07/15/1986	Stern	—	—	
AW	AB	US 5,124,914	06/23/1992	Grangeat	—	—	
AW	AC	US 5,163,126	11/10/1992	Einkauf et al.	—	—	
AW	AD	US 5,731,819	03/24/1998	Gagne et al.	—	—	
AW	AE	US 6,057,859	05/02/2000	Handelman et al.	—	—	
AW	AF	US 6,208,347	03/27/2001	Migdal et al.	—	—	
AW	AG	US 6,337,880	01/08/2002	Cornog et al.	—	—	
AW	AH	US 6,388,670	05/14/2002	Naka et al.	—	—	

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## Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation
	AI						Yes No
	AJ						

## Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AK	Alliez et al., "Progressive Compression for Lossless Transmission of Triangle Meshes." University of Southern California, Los Angeles, CA: 195-202.
	AL	Bajaj et al., "Progressive Compression and Transmission of Arbitrary Triangular Meshes." Department of Computer Sciences, University of Texas at Austin, Austin, TX.
AW	AM	Chow, "Optimized Geometry Compression for Real-time Rendering." Massachusetts Institute of Technology, Proceedings Visualization 1997, October 19-24, 1997, Phoenix, AZ: 347-354.
	AN	Cohen-Or et al., "Progressive Compression of Arbitrary Triangular Meshes." Computer Science Department, School of Mathematical Sciences, Tel Aviv, Israel.
AW	AO	Dyn, N., Levin, D., and Gregory, J.A. "A Butterfly Subdivision Scheme for Surface Interpolation with Tension Control." <i>ACM Transactions on Graphics</i> , Vol. 9, No. 2 (1990).
AW	AP	Elber, "Line Art Rendering via a Coverage of Isoperimetric Curves." <i>IEEE Transactions on Visualization and Computer Graphics</i> , Vol. 1, Department of Computer Science, Technion, Israel Institute of Technology, Haifa, Israel (September, 1995).
AW	AQ	Foley et al., "Computer graphics: principal and practice." Addison-Wesley Publishing Company, Reading, MA, 1996: 1060-1064.
AW	AR	Hoppe, "Efficient Implementation of progressive meshes." <i>Coput. &amp; Graphics</i> , Vol. 22, No. 1: 27-36 (1998).
	AS	Hoppe, "Progressive Meshes." <i>Microsoft Research</i> : 99-108. <a href="http://www.research.microsoft.com/research/graphics/hoppe/">http://www.research.microsoft.com/research/graphics/hoppe/</a>

Examiner Signature

Albert W. Paladini

Date Considered

7-7-05

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<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR 501.2(b))		Applicant Carl S. Marshall et al.	
		Filing Date January 4, 2002	Group Art Unit 21232127

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
<i>[initials]</i>	AT	Hoppe, "Progressive Simplicial Complexes" <i>Microsoft Research</i> , <a href="http://www.research.microsoft.com/~hoppe/">http://www.research.microsoft.com/~hoppe/</a>
<i>Ans</i>	AU	Landsdown et al., "Expressive Rendering: A Review of Nonphotorealistic Techniques" <i>IEEE Computer graphics and Applications</i> : 29-37 (1995)
<i>Ans</i>	AV	Lasseter, "Principles of Traditional Animation Applied to 3D Computer Animation" <i>Pixar</i> , San Rafael, California, 1987.
<i>Ans</i>	AW	Lee, "Navigating through Triangle Meshes Implemented as Linear Quadrees" Computer Science Department, Center for Automation Research, Institute for Advanced Computer Studies, University of Maryland College Park, MD, April, 1998.
<i>[initials]</i>	AX	Lewis, "Pose Space Deformation: A Unified Approach to Shape Interpolation and Skeleton-Driven Deformation." <i>Centropolis</i> , New Orleans, LA: 165-172.
<i>Ans</i>	AY	Ma et al., "Extracting Feature Lines for 3D Unstructured Grids" Institute for Computer Applications in Science and Engineering (ICASE), NASA Langley Research Center, Hampton, VA, <i>IEEE</i> (1997).
<i>[initials]</i>	AZ	Markosian, "Real-Time Nonphotorealistic Rendering" Brown University site of the NSF Science and Technology Center for Computer Graphics and Scientific Visualization, Providence, RI.
<i>Ans</i>	AAA	Pajarola et al., "Compressed Progressive Meshes" Graphics, Visualization & Usability Center, College of Computing, Georgia Institute of Technology, January, 1999.
<i>[initials]</i>	ABB	Popovic et al., "Progressive Simplicial Complexes" <i>Microsoft Research</i> , <a href="http://www.research.microsoft.com/~hoppe/">http://www.research.microsoft.com/~hoppe/</a>
<i>Ans</i>	ACC	Raskar, "Image Precision Silhouette Edges" University of North Carolina at Chapel Hill, <i>Microsoft Research</i> , 1999 Symposium on Interactive 3D Graphics Atlanta, GA: 135-231 (1999).
<i>Ans</i>	ADD	Samet, "Applications of spatial data structures: computer graphics, image processing, and GIS." University of Maryland, <i>Addison-Wesley Publishing Company</i> , Reading, MA: 1060-1064 (June, 1990).
<i>[initials]</i>	AEE	Taubin et al., "Progressive Forest Split Compression." <i>IBM T.J. Watson Research Center</i> , Yorktown Heights, NY.
<i>Ans</i>	AFF	Thomas et al., "The Illusion of Life: Disney Animation," <i>Hyperion</i> , 3:47-71, New York, NY (1981)..
<i>Ans</i>	AGG	Zelevnik et al., "SKETCH: An Interface for Sketching 3D Scenes." Brown University site of the NSF Science and Technology Center for Computer Graphics and Scientific Visualization (1996).
<i>Ans</i>	AHH	Zorin, D., Schroeder, P., and Sweldens, W. "Interpolating Subdivision for Meshes of Arbitrary Topology." Tech. Rep. CS-TR-96-06, Caltech, Department of Computer Science, (1996).
<i>[initials]</i>	AH	<a href="http://research.microsoft.com/~hoppe/#pm">http://research.microsoft.com/~hoppe/#pm</a>

Examiner Signature <i>[Signature]</i>	ALBERT W. PALADIN PATENT EXAMINER	Date Considered 7-7-05
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